

PERCEPTIONS OF THE GRAND CANYON: A THESIS ON THE  
COMMODIFICATION OF NATURE

By

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## **Abstract**

The way individuals interact with and perceive their connections to nature is a contested subject. The “commodification of nature” theory examines how commercialized systems are inherently linked to the commodification and capitalization of goods and services provided by natural spaces and systems. In this thesis, I examine the relationships between the way individuals perceive and experience natural spaces and the commodification of the goods and services those natural spaces provide. I do this by creating three “lenses”, the “Ground”, the “Air”, and the “River”, and analyzing the market for experiences that have been created through each of them within the Grand Canyon National Park. I find that the resulting “externalities” of these experiences have long lasting and damaging effects on the natural systems in the park and the surrounding communities.

## **I. Introduction**

The Grand Canyon National Park is a federally managed area that resides within the United States National Park System. The Grand Canyon is located in Northern Arizona approximately 78 miles north of Flagstaff, Arizona. The entirety of the canyon runs 277 miles long, 18 miles wide, and 6,093 feet (1.15 miles) deep. The canyon holds significance in many different facets including economically, culturally, and ecologically. The national park itself provides thousands of jobs for numerous individuals who help with the maintenance within the area.

Human history within the Grand Canyon dates back 12,000 years to the Paleo-Indian period. Many historical structures throughout the area hold culturally significant value to the Puebloan Tribes that surround the park. The canyon also provides habitat and protection for many plant and animal species that are facing endangerment and extinction (nps.gov 2019). The Grand Canyon holds value beyond its economic opportunities, but also as a beautiful, inspired landscape, which is why it was originally designated as a protected land area.

The area, although not technically awarded official National Park status until 1919, has served as a hub for early settlers and indigenous people alike for thousands of years. Ecological and cultural evidence indicates that Native American tribes, such as the Ancestral Puebloan communities, have lived within and around the canyon for approximately 12,000 years. There are several historically and culturally significant artifacts and places that still exist within the Grand Canyon.

The construction of the Grand Canyon Railroad in 1901 began to bring white settlers and tourists to the region. This influx of migrants led to a significant economic boom, which in turn led to the development of many municipalities in the area, the majority of which depended greatly on the tourists traveling to and from the Grand Canyon. The significant draw of the canyon, then and now, was the raw power of mother nature, the purity of the skies, which lacked the pollution from industrialized cities, the bareness of the ground, which remained unpaved, and the rapids of the Colorado River laying at the bottom.

Within the Grand Canyon, there are several companies which provide services, lodging, food, helicopter tours and river rafting to individuals who want to have certain experiences. Typically, these companies take a good or service provided by the canyon naturally and manufacture it into a package that is appealing to tourists didn't have access to these goods and services or wanted an easier and more convenient way to

cultivate their perceptions. Within the academic literature, this is referred to as the commodification of nature theory.

In this thesis, I seek to analyze one of the greatest and most wondrous examples of the prowess and determination of nature -- the Grand Canyon -- and understand how individuals choose to experience it. In my research, I ask: How do individuals visiting the Grand Canyon National Park perceive, interact, and experience the park and then ultimately, how do these perceptions contribute to or reinforce the commodification of nature in the park?

My methods for this project include background research on the private companies that exist within the Grand Canyon National Park. This is important to provide context as to the economic systems that have been established in the park, and ultimately, how these might contribute to the "commodification of nature". In addition to this research, I travelled to the Grand Canyon to conduct a survey of individuals visiting the park to better understand the individuals who use the services provided within the park. I surveyed 50 visitors to the park and performed semi-structured interviews with four subjects in order to understand how tourists interpret their relationship to the natural spaces and the experiences provided within the area of the national park. Both the survey and the interviews were stratified randomly between gender and age, as to not create bias between myself and the individuals I choose to interview. Ultimately, through

my background research, survey, and interviews, I find that the commodification of natural spaces comes with consequence to both the local ecology and the socioeconomic stability of the surrounding area of the Grand Canyon National Park.

I organize my examination of the potential commodification of the Grand Canyon by viewing the Canyon through a lens of the Ground, the Air, and the River. For each lens, I will investigate and describe what specific experience individuals are looking for, and how it is being commodified by a privatized company. The motivation of this research is to contribute to the conversation on commodification of nature, and specifically, how it proliferates through the Grand Canyon National Park.

## **II. Literature Review**

The commodification of nature is a philosophical and economic theory whose origins can be realized as far back as the socioeconomic and ethical writings of Karl Marx and Friedrich Engels in the 19th century. Marx's writings were considered to be the basis for the development of communism and socialism in the early-20th century, particularly in Soviet Russia. As was originally defined, the commodification of nature is fundamentally the framework for which human-nature interactions are mediated and qualified (Gunderson 2016). Marxism was particularly interested in the use of nature as

capital in the exchanges in socio economic systems of various communities and societies.

In layman's terms, the commodification of nature is concerned with the qualification of natural systems as a benefit to the user without necessarily considering the consequences on the systems themselves. This ideology is present in Marx's chapter on the relationship between soil chemistry and capitalistic tendencies of rural England (Marx 1977). Marx theorized that the movement of peasants and the closure of common lands during the early privatization of the rural countryside led to a lack of fertilization and a significant change in soil chemistry, which in turn led to change in the natural foliage that existed around urban focal points. The closure of common held land was clearly an economic necessity for the emergence of capitalism in the early-19th century, which in turn began the largest movement for the commodification of natural systems yet seen for the history of sedentary societies (Ricoverti 2013).

Karl Polanyi, a Hungarian-American political and economic theorist who wrote in the early- to mid-20th century, also writes about commodification of nature theory. In his 1944 book, *The Great Transformation*, Polanyi (1944: 71) denotes natural systems as "fictitious commodities" and delineated nature from its "true" form, and "land", which in this case is nature that is groomed to be commodified and sold as a product. In his view, "land" is an imaginary commodity that removed from nature, and in that process, natural

systems then become an essential part in the market system created through labor (which in itself is untrue). Polanyi theorizes that the creation and functionality of “liberal capitalism” cannot exist without the use of nature in some amount during manufacturing and production processes.

In essence, the process of capitalism is built upon the world created before us, by nature and our ancestors. Whether or not this is true, it provides a foundation which allows the reader to attribute monetary and marketable values to natural systems and their parts. Polanyi 1944: (76) goes on to theorize that, “the market mechanism [is the] sole director of the fate of human beings and their natural environment” and that if we, as human beings, were to continue this pattern of use, “[this] would result in the demolition of society... Nature would be reduced to its elements... landscapes defiled, rivers polluted... the power to produce food and raw materials destroyed”.

A more modern interpretation of nature as a commodity that is transformed for the needs and wants of the market lies in several economic theories. Neil Smith, a geographer from Scotland, based out of the University of New York in the late-1990's to early-2000's, engaged in research focused on spatial industrial development in a modern, capitalistic society. In *Uneven Development*, Smith (1984) wrote about how nature is separated into “first” and “second” nature (external and internal value). Whereas we often see nature as a physical entity that engages with the five senses,



Smith theorizes there is an internal value (possibly interpreted as some religious or spiritual value) to natural systems that are also often commodified. In relation to this, Smith denotes that industrial spaces created by a capitalistic society has significant influence on how individuals consume and perceive natural spaces.

The essential issue with commodification of nature, according to Polyani, and later than Smith, is that in order for a capitalistic society to grow, it continually needs to gain private capital that is then modified to fit the needs of the market. This can be demonstrated in a simple formula (See Figure One below). Under this formula, money allows privatized individuals to gain more capital, which is then transformed and manipulated into a commodity that can be sold or utilized to gain profit.

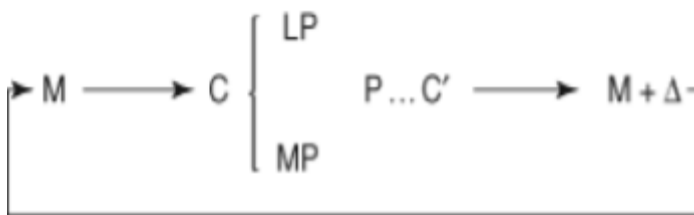


Figure One: Basic Commodity Formula  
Source: Ricoveri 2013

### *Historic and Modern Examples of the Commodification of Nature*

The theoretical issue with the privatization of natural commodities is not a new concept. A highly contested and influential case that comes to mind in which these theories can be applied is the damming of the Hetch Hetchy River Valley in Yosemite

National Park (Righter 2007). In the early-20th century, plans were introduced to dam the Tuolumne River in order to provide a cheaper and more reliable water source to the newly reconstructed San Francisco. The Raker Act of 1913 authorized the building of the O'Shaughnessy Dam, which was then highly contested by several environmental enthusiasts; most famously John Muir. As the president of the Sierra Club and the author of the *Wilderness Essays*, Muir's activism had a significant impact on the creation of the National Parks System. As was articulated in *The Yosemite*, Muir (1912: 260) believed that the creation of the dam for commercial reasons could be equated to "[Damming] the people's cathedrals and churches, for no holier temple has ever been consecrated by the heart of man". From Muir's perspective, the commodification of the natural system that lies within Hetch Hetchy Valley is comparable to the desecration of a religiously significant area. It is quite clear that Muir, and others, would be negatively affected in some way if the area was privatized. However, in 1913, the government persisted and the dam was put into place. This event was clearly a catalyst that contributed to the conversation about perception and commodification.

A more modern application of commodification of nature theory is the use of natural snow melt and the natural structures that surround the town of Sedona and the village of Oak Creek. Colloquially, "Slide Rock" is a natural structure carved out over hundreds of thousands of years by the natural snow melt that runs down from the nearby

San Francisco Peaks during the late spring season. These structures are a testament to the raw power and persistence of nature for sure, but within the last few decades, the area has turned from amazing beauty to family farm to state park. The state park is now a very popular summer vacation spot for families looking to cool off in the Arizona heat. The rock formations allow for a type of “natural waterslide” that individuals can slide down and splash into the natural pools below. All of these activities are available for a nominal fee. I have visited this area many times, and have fond memories from each trip. I think that these experiences are unique. However, the area is rife with individuals leaving trash and graffiti following their trip, and the rocks experience structural damage from the hundreds of passersby that come through during the popular summer months. These issues can be considered externalities of the transformation of the natural structures of an area into commodities. These externalities, like any other commercialized system, aren't always accounted for nor internalized. It is possible to attribute a fee to destructive acts or to enforce stronger regulations against those who do these things, but who is there to ensure that these ideas are put into place? It is not always clear how to enforce these things when nature is capitalized to turn a profit.

Perhaps the experiences we seek and the ideas we want to materialize can be uncoupled from the tendency of a market system to destroy or damage the original commodity source. Along the same lines, perhaps we are able to find a renewable and

sustainable source for the experiences we desire. Or, if we choose to continue to capitalize natural spaces in the same way, perhaps we will no longer get to even experience certain goods and services provided by them. It is with this theoretical background, and these potential questions in mind, that I examine the Grand Canyon through three lenses: the Ground, the Air and the River.

### **III. The Ground**

Tourism within the National Parks has been a driving factor behind their preservation since the initial concept for a designated space of federal land for conservation was imagined under the presidential administrations of Roosevelt and Wilson. Many individuals feel an almost religious-like connection with the consecrated lands of the Grand Canyon, Bears Ears National Monument, and Yosemite National Park, and some seek to travel to each of these places in a quasi-pilgrimage. These spaces clearly hold a sentimental, if not ethereal, to certain individuals and historical figures.

According to statistics released by the National Park's website, park visitation has increased annually by over 1600% from 37,745 visitations in 1914 to 6,380,495 in 2018 (NPS 2018). This significant increase can be attributed primarily to advances in technology and increases median household income over the last few decades has left

families with more available funds for travel. However, there is something about the Grand Canyon, a magnificent work created by millions of years of erosion, that attracts visitors at all points in their lives, careers, and spiritual journeys.

Through this project, I interested to understand why so many have put seeing the Grand Canyon on their “bucket list”. Over the course of a day trip to the National Park in March 2019, I conducted in-depth interviews with four separate individuals visiting the park as well collected survey data from over 50 passersby to learn what visitors planned to experience at the park, and what, in effect, was being commodified.

### *Perceptions of Experience*

Many consider the chance to see the Grand Canyon as a “once in a lifetime” experience. Numerous pop culture references can be made in terms of knocking off this trip “off the bucket list.” A notable reference can be made to the popular television show “Parks and Rec”, in which the episode “End of the World”, a reference to said “bucket list”, follows the characters Andy and April on an “end of the world” road trip from the fictional town of Pawnee, Illinois, to the Grand Canyon. In this episode, many of the characters lament about which they would do or “have to do” before the world comes to a fictional end at midnight.

These characters choose to make the journey to the Grand Canyon in order to see the park glisten with beautiful colors and sights at Sunrise. Akin to the popular saying, “art often imitates life”, such is the case here. In my research, I found that many individuals traveled to the Grand Canyon National Park for “a once in a lifetime experience,” “something that you have to do once before you die.” This type of thinking is so often idealized in television and movies, that it manifests itself in the real-life perceptions of numerous individuals. The way that they perceive *how* and *why* they should experience the Grand Canyon is highly influenced by media interpretations. That is not to say that this type of thinking has no merit. Indeed, the Grand Canyon at sunset, sunrise, or really, any time of day, is a sight to be cherished. As a researcher, I was significantly interested in discovering what, exactly, is driving the narrative behind seeing the Grand Canyon before the fictional “end of the world”.

Within this part of my research project, I developed two short questions which I asked people as I wandered around the South Rim. These questions were formulated in order to understand individual’s perceptions of the area and the offered attractions. They include: (1) *Based on previous expectations, would you say that this experience lived up to, exceeded, or fell short?* and (2) *If you had to come up with three words or phrases to encapsulate your thoughts, feelings, and impressions of the Grand Canyon National Park, what would they be?*

Many individuals were able to quickly give a few words that came to mind; magnificent, awe-inspiring, beautiful, these being the most common. Figure Two displays the most frequent words to describe their experience at the Grand Canyon national Park. Some people expressed emotions as if they were presented with such beauty that they had issues articulating their impressions. Overall, most every individual questioned provided some answer that was an attempt to capture the magnitude of the sight that stood before them.



Figure Two: Most frequent words offered by survey participants

In asking 30 individuals how they would rate the realizations of their expectations (on a scale from 1-5), many answered at a level of 5. When prodded for an explanation,

many gestured to the idyllic scene lying before us, referencing the vast ocean of a crater as a reason in itself. Many expressed to me as a researcher how the view in of itself was the reason for such expectations being met. Which, again, is not entirely without merit, but when asked for their ratings, other individuals gave lower answers, 3's and 4's. One individual in particular, with whom I later asked for a longer, more detailed interview, simply was unhappy with one thing: The fact that she felt that having an entrance fee, which was \$35 per motor vehicle, felt like "gate keeping". In fact, she felt that it was quite limiting on the realization of a dream so many of us seem to have. A few others shared her sentiment, but none spoke so clearly and direct about their concerns as she. So, why, exactly, did she voice such concern?

### *A Once in a Lifetime Opportunity*

Through more in-depth interviews, I sought to understand how visitors were interacting with and experiencing the Grand Canyon through several questions. In this longer discussion, I asked: (1) *Why did you choose to travel to the Grand Canyon National Park?*, (2) *What were your expectations before coming?*, (3) *What were your initial perceptions and impressions*, and finally, (4) *Did the financial costs burden your experiences?* I solicited interviewees randomly from different spots on the Southern Rim, to get a random sampling of perspectives. Each had their own reasons for making the



journey, however, all of them were celebrating some type of significant or momentous occasion. Each interviewee ranged in age from their early 30's to late 60's, Caucasian, and mixed gender (three females and one male).

The first interview brought me in contact with an individual from Wyoming. This gentleman was sitting alone on a bench, next to a few closed gift shops. A few feet away, sat the edge of the precipice, where thousands feet down was the bottom of the canyon. He seemed content to just be observing, which is why I felt fairly confident asking if I could ask him a few questions. This individual was a bit older, as were most of my interviewees, and he had more time to sit a chat than a more busy family. In our interview, he spoke about his past as a wildlife manager for the National Parks system up in the northern states, and was quite excited to be able to discuss his reasoning for coming to this part of the country. At some point, his wife had joined us in our conversations, providing her own perspectives as well. When asked why he chose to visit the Grand Canyon over other destinations, the individual explained; “[The] Grand Canyon’s been on my bucket list since as long as I can remember. [Subject glances at his wife for confirmation]. Since, yeah, probably, about five years old. And we thought this would be a great opportunity, my wife and I; I turned 69 yesterday. And I wanted to spend my 69th birthday at the Grand Canyon.” The individual, who was celebrating a

birthday, a significantly important occasion, decided to knock off a “bucket list” item at the Grand Canyon National Park. The experiences of other subjects were comparable.

The individual who chose to comment on the financial costs of the park, was on a road trip with her husband and her terminally-ill brother; somewhat of a last hurrah for the three of them. Another interviewee was celebrating her anniversary with her husband, another momentous occasion, “[The Grand Canyon] is beautiful. And the whole experience has been great because we’ve had a great tour guide that has explained everything to us. And it’s mine and my husband’s 25th anniversary. So, how else would you rather spend it?” Each individual had some kind of important event occurring in their life at this point in time, and each had decided to spend it in this location. Many of them also referred to the fact that they “had” to see the Grand Canyon. Like it was some type of unspoken rule of completion at least once in their lives.

Each individual who was asked to participate in longer, more in depth interview, was also asked the survey questions beforehand in order to gain context for the following interview. During the survey portion, when asked about their expectations for this experience, these participants still articulated that they were either met or exceeded. Most agreed that this experience had really changed their perspective on the park. One individual, who I had met in a more secluded spot down the trail, provided an exemplary quote; “When we decided to go here, I’m like, Oh it’s just a hole in the ground... Like

why do I want to go see that? But you get out here and it's just so scenic. So beautiful. You just, I mean, it sends shivers up my spine." It is evident that this individual hadn't been expecting much in terms of return on investment. Another interviewee had been to the National Park once before, but was turned away after significant amounts of fog had rolled into the park. After 10 years, she had decided to return, not quite sure what to expect this time. As was articulated previously, *what more can you expect from a giant hole in the ground?* On the contrary, this individual truly felt that her expectations of how she would experience certain things were exceeded.

Continuing on, the idea that these experiences were meant to be preserved became abundantly clear later as the interviews proceeded. When asked about their original impressions or thoughts, many explained that they had significant feelings of greatness. Sometimes, it was within themselves. The older gentleman from Wyoming said he felt triumphant that he had been able to spend this momentous occasion at the park. He was proud of his accomplishments in marking another thing off the list. Sometimes, it was within the park. The individual with the terminally ill brother implied that she felt rather small in comparison with the wide-open space in front of her, claiming, "This is a place to get lost." Clearly, these experiences represented different things for different people. Some saw it as a testament to nature, or God, in one

interview. A testament to the raw power held by the spaces around us, clearly something to be humbled by. Others simply see it as a *giant hole in the ground*.

Although it was clear that many felt inspired by their trip, others articulated that the exclusion of certain individuals from “knocking it off the bucket list” based on financial security was an issue. In the process of interviewing individuals and asking survey questions, I learned that many people believed that this experience, of visiting the Grand Canyon National Park, was priceless. In essence, they would pay any price. In particular, they believed that it was “worth” it to travel great distances and spend large sums of money in order to have these experiences. A few also referenced the fact that the entrance fee, and other incidental fees, paid for the salaries of the park rangers and the “upkeep” of the area. Which certainly is true; in order to have a product to “sell”, there must be “investment” costs.

However, what happens when someone can't afford the initial investment? This issue was brought to my attention by the individual with the terminally ill brother. It's only priceless until you can't afford it. She goes on to say, “I would like to see it equitable for all really. I really would. I would... this is our land, right? And, we're paying taxes... [Individuals] may not see anything that shows where their money goes. But [the Grand Canyon] would show that and why pay more for what they've already paid.” She certainly felt as if they had already paid for their access to the land through taxation. It's difficult to

determine exactly how each cent of the taxes we already pay is attributed to the park and its upkeep. However, adding in the entrance fee, travel fees, souvenirs, and everything else, it becomes overwhelming for families of financially insecure economic backgrounds.

Sitting and observing the rush of tourists throughout the park made it clear how much commercialization, and excess spending, has infiltrated the park. As I sat in a particularly gift shop heavy section of the South Rim, I began to notice that instead of daypacks for hiking, many individuals were clutching gift shop bags of t-shirts and candy and stuffed animals. Instead of seeing refillable water bottles being carried by avid hikers, I saw plastic bottles and cans of sugary sodas and lemonade. Much of this was the result of the great number of gift shops and stores and hotels, all within the little section of the Southern Rim. During one interview, one individual even commented on the expensiveness of souvenirs within the park; “The little souvenirs that kinda get you... I was hoping to buy some t shirts, but not at this price.” These fees and costs add up, and certainly become unmanageable for someone on a budget.

Of course, there is no requirement to partake in the buying of shirts or toys or candy, but the temptation is palpable. At no point in time was I not steps away from a shop or restaurant. This section of the park was certainly commercialized to the point

that it almost seemed trivial. But why has this “once in a lifetime experience” become so marketed through physical entities? Sentimentality, is why.

### *The Problem with Marketable Sentimentality*

Much of what was presented through these interviews, surveys, and observations all led back to the “sentimentality” of traveling to the Grand Canyon. So many of my interviewees were celebrating momentous occasions; birthdays, anniversaries, and end of life trips. All truly wanted to mark the occasion by doing something “meaningful” with their time. Through my observations, I saw numerous individuals attempting to “capture the moment” by taking pictures with family and friends. All of this was in the name of sentimentality. Nature has a powerful draw in terms of beauty and awesome images. As humans, we want to partake in that beauty and remember it. However, within the national parks, the need to remember, partake, and “prove”, has resulted in the over-marketing of sentimentality.

Instead of absorbing the imagery and feelings, many individuals want physical mementos that hold relatively meaningless values for exorbitant prices. These include T-shirts and stuffed animals to mark the occasion. Even the entrance fee, although it provides funds for upkeep and park ranger salaries, is a commercialization of something

that we “own”. Which, as was articulated previously, is limiting to those who can no longer afford to partake in these experiences because of limited incomes.

This becomes even more of an issue when we consider the words of John Muir, “Everybody needs beauty as well as bread, places to play in and pray in, where nature may heal and give strength to body and soul.” Nature, and natural places, are to heal and reflect. In some ways, we might be taking away the value of certain experiences by over-commercializing the sentimental attitudes attached to them. By over inflating prices of experiences, we are limiting the value individuals can receive from said experiences. By attaching price tags to the value of sentimentality and sentimental experiences, we are in effect reducing access to the experiences for some individuals. Which is misaligned from the original purposes of the creation of National Parks in the first place.

Perhaps we should decouple the sentimentality of “knocking it off the bucket list” from the commercialization of experiences. That would, in effect, make it more affordable for many individuals. Or perhaps we should remove the commercialization entirely and knock down shops and hotels and return to the more “natural” way to experience nature; camping and hiking and just absorbing the beauty spans the length of the Grand Canyon.

## IV. The Air

As of the early 19th century much of the country, other than the indigenous communities and the Spaniards that settled the area in 1544, was unaware of the natural marvel that was the Grand Canyon. That is, until the great explorer, John Wesley Powell, embarked on a river expedition in 1869. This journey led to a mapping of the canyon's lengthy river and canyon walls, much of which is still referenced today. Since this time, many artists, such as Thomas Moran, have tried to capture the beauty of the sky that surrounds the Grand Canyon. Moran himself was inspired by Powell's third expedition in 1873, displaying through his paintings the perceived moral prowess of the canyon and the romantic ideals of the time. His beautiful reds and blues were enough to partially influence President Roosevelt, who at the time was cultivating the beginnings of the National Parks System, to declare the Canyon a National Monument in the early 20th Century. Moran's contemporary, the Swedish artist, Gunnar Mauritz Widforss, gracefully captured the beautiful skies soaring over the canyon in his painting, *Grand Canyon*, painted in 1923 (See Figure Three).





Figure Three: Gunnar Widforss, *Grand Canyon* 1923  
Source: National Park Service

In the technology age of today, onlookers attempt to experience these colors at a closer range; through the helicopters and planes that glide through the sky around the area. Brilliant and beautiful sites are gazed upon from the skies; the awe-inspiring canyon threatening to swallow the visitor from below. Many companies have taken to capitalize upon this previously untouched air space by containing and obtaining the rights to use it for their own gain. What was once a clear image can be now seen to be dotted with various flying devices and technologies.

As early as the late-20th century, Air Tourism began developing as a new and increasingly more immersive way to experience the natural ruggedness of the park. The unimpeded sky above the park is particularly conducive to visitors who wish to escape the crowded visitor centers of the park. “Aerial visitation” has become the new way to explore the skies above the canyon as technology continues to expand into

commercialized travel (Alexander 1998). By the 1980's, tours of Grand Canyon National Park had sky rocketed to 40,000- 50,000 flights annually. Concerns for the safety of tourists in the ever-increasing industry lead to the creation of the National Parks Overflights Act of 1987, which launched an investigation of safety issues and flight path concerns within the area. Tighter flight path restrictions and limitations of flight areas (approximately 40% of the park was no longer permitted for air tours), however, did not quell the growing industry. Into the 1990's, noise pollution from the aircrafts had only grown as companies continued to add planes and helicopters to their fleets. In 1996, the number of annual flights had increased to 80,000 to 95,000.

According to the Arizona Department of Transportation, as of 2018, three companies are responsible for the majority of tours over the canyon. An unlimited number of flights per day can be launched, taking off from any number of locations, including Las Vegas. Companies are continually pushing for more air space and time in the air. This has led to a number of fatal crashes in the area, most recently in 2018, when a flight chartered by the company Papillion, the largest company of the aforementioned three. Yet, the number of daily flights continues to grow despite safety concerns. This is not even to mention the issues with noise pollution as well as physical pollution produced by aircraft engines.

Although the ability to now capture the beautiful from new and more daring angles can be considered a testament to the innovative and entrepreneurial spirit of mankind, each image taken from these natural scenes often comes at a price. Even if examined only from an economic sense, these capitalizations create many externalities that often go unnoticed and unmitigated by the companies who create them. From a political examination, we find ourselves asking who polices and governs the air space.

### *Just Doing Business*

Within the economic world, companies and privatized individuals deal with effects of production, either monetary or physical, which are referred to as externalities. Often we think of externalities to be a consequence of “just doing business.” A company may choose to internalize them, meaning they choose to innovate or increase monetary investment in the whole process, essentially mitigating the issue at the source. A company may also choose to ignore the externalities that they create, instead leaving others to deal with them and create solutions.

The companies that charter flights within the Grand Canyon airspace are in the business of providing a means to an end; the creation of flight paths above the canyon are a means to allow tourists to capture the feeling of flight and freedom. According to Alexander (1998), the thousands of flights that occur everyday charter millions of tourists

around the Grand Canyon per year. These flights costs upwards of \$300 per person, according to Papillion Air Tours (2019), of which the name is the french word for “butterfly”, a clear reference to the insect’s freedom of flight. The company is internalizing this revenue, which is not returned to the park as this specific company is based out of Las Vegas. However, the resulting consequences of these capitalistic ventures are left as externalities.

Creating a system in which the externalities of any process are internalized is ultimately the best strategy. But first we must identify and define what the externalities of the current system are. Air pollution is an obvious product of mechanized flight. The incomplete combustion cycle of most diesel and gasoline engines produces gigatons of primary pollutants, such as particulate matter, nitrogen dioxide, sulfur dioxide, and carbon, every year. Approximately 70% of all particulate matter emission in the United States can be attributed to vehicle combustion and large engine combustion, and an even higher percentage (almost 80%) of carbon monoxide emissions can be attributed to the same source (U.S. EPA Air Trends 2010). This type of pollution, particularly the small dust and carbon particulate matter, have been heavily linked to the development on several lung and heart conditions, and to the exacerbation of existing cardiovascular and cerebrovascular issues (Anderson et. al 2012).

The engines of the passenger planes and the helicopters that tour above the canyon contain the same type of combustion engine that exist in motor vehicles. The leftover products from this combustion leave undesirable effects on the inhabitants in the area, both animal and human. Studies dating back to 1978, in particular the Winter Haze Intensive Tracer Experience (WHITEX), have shown concerning results regarding pollution effects on the area (Davis et. al 1993). Particular weather conditions, polar highs, were shown to increase the amount of pollution. More recent studies, conducted at Hopi Point within the Canyon, demonstrate a similar pattern, with worsening effects during the summer months (Davis et. al 1993). Although there is evidence that a partial amount of this pollution can be attributed to the Navajo Generating Station that lies to the north of the Canyon, the increase in pollution effects during the summer indicate a significant portion can be attributed to the increase in helicopter tourism during that time.

Another type of pollution is noise pollution from the increased traffic within the air space. Noise pollution is a type of pollution that has a larger effect range than “traditional” pollution and a less visible response. Noise pollution has been shown to have a greater effect on avian communities than other animal species. Avian communities rely on a significantly greater amount of oral and aural communication, and the noise pollution from nearby roads and human populated areas have been shown to have a negative impact on the community bird populations (Francis et. al 2009). The

Grand Canyon is home to numerous bird species, including the critically endangered California Condor (NPS 2017). In 1996, the Condors from the existing breeding program were reintroduced into the area. However, those birds that currently inhabit currently face irritation from air pollution from the flight tours invading their territories. The risks to the population threaten their growing abundance in the area, which in turn threatens the area diversity.

Both of these examples are externalities of the helicopter tourism within the area. They are physical expenditures of the “production” of visual experiences and abstract feelings by the companies that run the flights around the Canyon. The monetary costs of “production” don’t account for the physical and aesthetic costs to the inhabitants of the area and the area itself. It merely costs the companies to fuel the planes and helicopters, pay the guides and the pilots, and help generate a profit. However, creating pollution, is often not mitigated by these companies, nor are they often held accountable for the damage it causes to the surrounding area. If we are truly wanting to understand the spectrum of issues that have arisen from this, we must look at the broader effects of these externalities that remain unaccounted and the broader damages to the area.

The development of “air” as a fictitious commodity for economic gain falls in line with Polyani’s theories. Those who seek to gain monetary value from an invisible space first had to create boundaries from which to lay claim. Although the “air” above the

canyon holds no physical markers, it is staked out for companies to use as they please, which in turn results in these externalities that affect the surrounding area. By commodifying the beautiful, diverse community for themselves, they are damaging the animals and plants that make the community beautiful and diverse. Both Karl and Marx theorize that these situations will ultimately lead to the destruction of the commodity. Although this holds merits in both the value of the commodity as an intrinsic element (the abstract experiences gained from the flights) and as an extrinsic element (the means to which that abstract feeling is achieved), which is an entirely separate argument in itself, the destruction of the element that is commodified through unaccounted externalities is not ideal. Ultimately, a system that commodifies nature for economic gain is doomed to self-implode, according to Marx and Polyani's theories.

### *Policy Enforcement*

Although the Grand Canyon National Park falls is managed by the National Park Service, under the U.S. Department of the Interior, the regulating agency for the airspace above the park is the Federal Aviation Agency (FAA). The invisible demarcation of federal ownership causes problems for the strict regulation of helicopter tourism that is necessary. On the federal register, several federal action plans have been published that demonstrate the technical power of the federal government. The FAA has published

plans for special flight rules for helicopter tourism companies within the canyon, which had been posted for public comment (83 CFR § 19135). The period for comment ended in May of 2018. The original document was posted on the register in February of 2018 (83 CFR § 5291), which stated that “Each operator seeking to obtain or in possession of an air carrier operating certificate must comply with the requirements of 14 CFR part 135 and part 121, as appropriate... [they] must additionally comply with the collection requirements for that airspace.” The original document (14 CFR § 121, 135) specifically refers to the requirements of the pilots in regards to the safety of their passengers and operational procedures.

Nowhere within this process are there any comments on the responsibilities of the pilots of the companies for the “externalities” of their processes -- pollution. The “collection requirements” for the air space also did not specifically state the responsibilities of the companies either. A more recent document posted on the Federal Register, effective November 2018, removes the necessary paperwork needed to be filed by companies for their visual flight plans (83 FR § 48209). By limiting the information provided by the pilots for their intended plans and trajectories, we inhibit the safety of the animal inhabitants of the area. The companies running these tours are not held accountable for the risks to the park, including safety and pollution issues. This action demonstrates how the Trump Administration has greatly scaled back the range of



NPS and the National Parks System itself, limiting the actions and ability of the agency to govern and regulate.

### *Consequences of Inaction*

The most adversely affected individuals by the commercialization of the area are animal habitants of the area, and the future tourism industry. Without the necessary governance and policies to keep companies in check, they are forced to deal with the externalities of the market. Theoretically, if the tourism industry continues to expand as it is with no boundaries or checks, the future potential for appreciation and experience diminishes. If we continue to create damage to nature spaces and drive out populations of birds and mammals, we run the risk of limiting the amount of attraction an area can provide to tourists.

This can be seen in any resources excavation system. If the resource is not harvested at a sustainable, replenishable rate, eventually the resource will be completely depleted because the company did not have limitations as to how much and when the resource could be harvested. In the case of air tourism in the Grand Canyon, the “nonrenewable resources” are the goods and services provided naturally in the area (I.E. beautiful views sustained by pollution free skies). If the rate of commercialization were to continue to increase, the “resource” is to be depleted and damaged beyond repair. The best approach to mitigating harm might be to think of this from an economic perspective.

Until these externalities are internalized by the system of companies, there is a huge risk of permanently damaging the good that is capitalized upon.

Perhaps there is the necessity to cease helicopter tourism within the bounds of the national park completely. In its current state, it is not a sustainable practice and will lead to long lasting damage to the area and those who live there. However, there is value to the large number of tourists that come through the canyon every year. The summer season often is a huge bolster to the economy, which brings enough commerce to last through the slower winter months. Data reported in 2015 showed that the \$584 million spent by tourists in the park supported 8,897 jobs and brought benefit of \$813 million to the local economy (NPS 2016). Tourism also brings awareness to certain conservation issues and endangerment issue, which has the potential of creating more change in the long run. Studies have also shown that tourists report an increased interest in sustainable tourism within their time of travel (Miller 2001). This demonstrates a considerable awareness of issues regarding the current system of tourism and a willingness to change. Perhaps this can be the catalyst for a more environmentally friendly and sustainable type of capitalism within the canyon and other destination points. In the end, there needs to be more focused and direct change to the current system, and that change needs to be enforced accountability amongst those who seek to capitalize upon the “goods” like air produced by the canyon.

## **V. The River**

The Colorado River is a source of both ecological and political power. During hundreds of millennia, it has carved through stone and earth in order to create the Grand Canyon as we know it today. It is a source of life; providing the Central Arizona Project (CAP) with millions of gallons of water for the Arizona residents who depend on it for agricultural activities, livestock sustainability, and municipal needs. The Colorado River is a physical entity that represents a metaphorical one, “Mother Nature”.

Thomas Moran, a well-known painter in the history of the Grand Canyon, captures the life-giving nature of the river within his paintings. Finished in 1882, his piece, “Nearing Camp, Evening on the Upper Colorado River” captures the luscious green foliage that surround the area, demonstrating the life-giving qualities of the river (See Figure Four). Other of his paintings, such as, “A Bit of the Grand Canyon, Grand Canyon of the Colorado River”, demonstrates the raucous rapids and dangerous power that lies beneath the surface. It is within that power that many seek to explore and experience through activities like river rafting. In attempts to profit upon this specific experience, many companies have “set up shop” in the bottom of the canyon.



Figure Four: Thomas Moran, *Nearing Camp, Evening on the Upper Colorado River*, 1882  
Source: artuk.org

According to the NPS website, as of 2016, there are fourteen river rafting companies based out of the Grand Canyon (NPS). Referred to as “river concessioners”, these companies offer 3 to 18 day trips, of which there are both motorized and non-motorized boats offered. Commercialized river rafting brings a return of approximately \$24 million, as of 2002, which has only increased since then. Statistics show that, on average, each company offers packages of \$250 per day, with packages offered up to \$400 per person (Hjerpe and Kim 2007). The NPS also offers permits for non-commercialized launches, but those are of very limited supply, and the waiting list for those can last from a few

months to multiple years. All of the non-commercialized permits are distributed via a lottery system. According to the 1989 Colorado River Management Plan, permitting frameworks allocate 68% of regulated boating days to commercial launches, while only 32% are allotted to non-commercialized launches. Since it was updated in 2006, these statistics persist; only has the number of passengers per commercial launch been increased during the “off season” (71 FR 14717).

These statistics demonstrate the monopoly that commercialized river rafting has on the use of the Colorado river for recreational activities. This becomes an issue in two ways: (1) Access to certain activities and experiences becomes difficult to financially insecure families and individuals who come from a poorer socioeconomic background; and (2) Significant issues arise in surrounding communities in terms of cultural security, socioeconomic stability, and infrastructure due to large influx of tourists to commercialized river rafting experiences

### *The Market of Adventure*

The commercialized river rafting companies within the Grand Canyon are in the market of adventure. In effect, they are crafting experiences and activities that are meant to entice certain individuals who seek to explore the power of nature. Once such company, “Arizona Raft Adventures”, claims to provide “awesome” and “exciting”

adventures to customers (azraft.com, nd). These companies are in the business of providing adventures to families and adrenaline junkies alike. They're "commodifying" adventure. Similar to Polanyi's (1944) theories about natural commodification, by "commodifying" the natural elements of a system, in this case the river, they are in effect "commodifying" a fictitious element of power and adventure.

The travel adventure market began to grow in the early-1970's, as disposable incomes and leisure time increased in the average American household. This is when the concept of adventure travel was developed (Heidi et al. 2000). In essence, this is the concept that individuals will travel to rural wilderness areas in search of "adventure". This led to a significant rise in tourism across America, but particularly within the National Parks System. Private venture companies began to take stakes in the tourism market industry by providing "adventure" experiences for tourists. As time went on, the market grew into a large industry, most of which is centered within the western half of the United States.

However, although the overall adventure tourism industry experienced a significant increase from the late-1970's until the mid-2000's, financially insecure individuals faced issues as prices for things like hotels, food, and experiences also rose. Families from certain demographics, such as African American and other minority demographics, reported less instances of leisure and tourism activities due to lack of

financial security and time availability (Hong et al. 1996). The adventure market boom made it harder for certain individuals to experience “adventure” in the sense that it came from experiences within natural spaces.

### *Socioeconomic and Environmental Impacts*

Within this tourism boom, outside of the inequality of experience, came the consequences of a capitalistic market. Initially, cities and towns located close to these adventure experiences experienced a large financial boost from tourists spending money in within their municipalities. Restaurants, hotels, and other actors in the tourism industry saw the most of that boost. For example, within the Glen Canyon municipality, during an influx of adventure tourists to the area during the early-1980’s and 1990’s, labor markets experienced large increases in overall employment (Douglas and Hartman 1994). Theoretically, this was a positive consequence of these markets; in the Glen Canyon study, many individuals reported that they considered the influx of jobs a better economic marker than any other tool. However, the resulting socioeconomic impact, as is the case in the Grand Canyon area, can have the adverse effect within the surrounding municipalities.

Pressures on municipal infrastructure, seasonal and part time employment, as well as low wages and perilous working conditions are all externalities of the adventure tourism industry. Issues arise when adventure companies bring the initial benefits of the

adventure market, job market flourishes, economic boosts, but fail to deal with the after effects (Marcouiller and Green 2000). Within the greater region around the Grand Canyon area, particularly in municipalities larger than 10,000, the resulting infrastructure pressure created issues within the city. This issue is articulated within the study by Hjerpe and Kim (2007), who found that the tourism brought in by river rafting had greater economic losses than gains. Things like traffic congestion, overcrowding of public spaces, and overall influx of tourists led many individuals who weren't participating in river rafting experiences to avoid certain areas out of pure annoyance. Other issues arose when the "off season" came around; many individuals who found employment during busy periods were laid off in order to compensate for lack of income from tourist related activities. According to this study, many individuals were unable to pay rent or mortgages amidst rising housing costs, and were forced to move away. This also led to a decrease in wages for individuals working for the adventure companies, as "off seasons" saw less tourism than busy seasons.

Finally, the environmental impacts of the adventure tourism industry become quite apparent when looking at pollution statistics. Water pollution originating from the Grand Canyon River basin has increased significantly since the inception of motored river rafting along the river. Toxic chemicals released in the chemical reaction within the engine can leave unsavory products, particles such as soot and sulfur. These elements



are toxic to the fish that live within the river, and biomagnifies and accumulates as it travels through the food chain. Other types of pollution, plastic and human waste, also causes issues for wildlife within the canyon, as well as the farms and households that depend on the water further down for agricultural and livestock activities. As noted in Hjerpe and Kim (2007), the air pollution associated with the influx of tourist travel is also a negative externality of the adventure tourism industry.

These specific socioeconomic impacts, as well as the environmental impacts, outlined above are two prominent externalities of the commodification of “adventure”. Commercialized river running companies are providing a service, river rafting adventures, however, they are doing so at a cost to the environment and other individuals outside of the participants in the adventure market.

### *Commodifying Adventure*

The concept of “adventure” is personified in much of the media that surrounds us daily. Anything that which references the “outdoors” is often accompanied by claims of adventure and explorations. Many iconic television and movie characters and franchises, see Indiana Jones, Jack Sparrow, the Hobbit series, are built upon the idea that to be “brave”, once must first emulate the spirit of adventure. In essence, this is what drives

most individuals to “conquer” nature and her “power”, which in this case is personified by the Colorado River.

This concept is what drove the adventure tourism industry boom in the late-1970's. Adventure capitalists saw a service in which to fill and commodify, which they did through monopolizing the river rafting experience within the Grand Canyon. What is being commodified is not just the physical land and water, but also, in line with Marx's theories, is the concept which it represents for some individuals. The physical entities are a means to an end, the end being the fulfillment of what qualifies as an “adventure”. This becomes an issue when the marketable characteristics of “adventure” lead to externalities outside the realm of those who choose to participate in the adventure market.

Infrastructure pressure, seasonal job losses, and pollution issues all stem from the lack of internalization of the adventure industry. In the case of the Grand Canyon, ideally one needs to create a substitution, or emulate, “adventure” commodity without destroying or damaging the surrounding systems in some way. Some would argue that the infrastructural and pollution issues that arise from adventure tourism are unavoidable, that to create profit there must be some level of loss. Such is the inherent problem with a capitalistic view of natural systems.

I believe that it is possible to create this sense of adventure without the negative socioeconomic and environmental impacts. More and more tourists are interested in sustainable tourism, be that either economically or environmentally. I think the best strategy would be enforcement of responsibility of the companies for their externalities. Perhaps, there should also be a reduction in the overall marketability of experience and adventure through commercialized means, and an increase in encouragement to create one's own adventure.

## **V. Conclusions**

The way humans perceive and experience nature is something that has been discussed and argued over for hundreds of years. Philosophers, like Immanuel Kant, and environmentalists, like John Wesley Powell, have argued that nature is not an entity itself, rather, it is a subservient system meant to relinquish goods and services to mankind. Other conservationists, like John Muir and Aldo Leopold, argue that nature and natural systems hold an intrinsic value that cannot and should not be taken or capitalized upon. It is possible to argue that there is both extrinsic and intrinsic value to be found in ecosystems, but it is when these values, in the inherent goods and services attributed to them, are commodified into a sellable product do we see issues.

Basic market theory states that in order for a capitalistic society to work, there must be the creation of a good or a service, there must be a way to market and sell those goods and services, and there must be a demand for said goods and services. Within these marketable systems, there are always externalities, consequences (either monetary or physical) that should be internalized within the system. However, it is often up to the companies and industries to police themselves in terms of creating ways to internalize externalities, as there is often no outside entity, a governmental system, social pressures, to enforce the “closing of the loop”. When the system fails to account for externalities in some way, often the consequences fall unto others who must burden the load for the companies. In terms of the capitalistic system in place today in the United States, often these consequences materialize in social issues, or issues related to infrastructure and the environment like pollution, habitat encroaching, and vegetation/animal loss.

This thesis project aimed to explore how visitors to the Grand Canyon National Park perceive the value of natural ecosystems, and how the ways individuals choose to experience the national park are part of a commodifying and capitalistic system. I find that individuals who travel to the Grand Canyon National Park are often in search of certain impressions, experiences, and feelings which they feel can only be captured at the Grand Canyon. Many travel hundreds and thousands of miles to fly above, hike

around, and raft down the national park. Much of the conversations I had and the data I collected referenced the spiritual and sentimental value that many individuals held, which can be equated to the intrinsic value theories proposed by other philosophers. It was clear that the Grand Canyon National Park has become a symbol for beauty, range, and grandness. Much of this is admirable; it is important to hold onto these qualities and beliefs, as much of those values often are what drive vital environmental movements and protests. However, it is the avenues and ventures through which individuals seek to experience these qualities and idea that are the ultimate problem.

The tourism industry, and the underlying companies which drive this industry, is responsible for the flights that run across the sky daily, for the souvenir shops, and for the river rafting expeditions up and down the Colorado River. Theoretically, this is a wonderful way to experience the natural qualities that attract millions of visitors yearly to the National Park.

Yet, generally, there is a lack of self-policing within the industry in terms of internalizing several externalities. Much of the issue stems from environmental issues; noise, sound, and physical pollution can severely affect the life quality of the 373 species of birds, the 91 species of mammals, and the numerous indigenous plant species in the area (NPS 2019). The pollution comes from the hundreds of chartered helicopter flights that fly within the Grand Canyon daily, run by companies who use marketing strategies

to appeal to individual's sense of freedom. Most of the companies tote a "once in a lifetime experience", which attracts adrenalin junkies and families alike. Theoretically, this only becomes an issue when the environmental consequences are mitigated by the companies. There exists outside forces, including the National Parks Service and the Federal Aviation Agency, which have guidelines and "rules" for privatized flight paths within the area, but often this is not enough to stop the effects on wildlife. These agencies either lack the enforcement power or simply have experienced severe cutbacks in employment numbers, which in turn creates severe limitations on what they have the time and money to monitor and regulate.

A similar issue persists with commercialized river rafting launches on the Colorado River. The companies that run these launches are advertising to individual's "sense of adventure" and need to experience the raw power of the Grand Canyon. Unlike those who choose to experience the chartered flights, these ideas of power and adventure seemed to be aimed at the want to "conquer" nature. Perhaps this then shifts the perspective from intrinsic values to extrinsic values, that nature is then subservient to us. In any case, this often results in pollution and the disruption of fish species within the river. There is even less instances of enforcement in these cases.

Although the National Parks System provides a limited amount of permits for non-commercialized launches in attempts to limit the overcrowding of the river system,

this does not seem to apply to commercialized launches, as well as creates a years' long waiting list. This creates even more problems when we talk about the unequal access issues that stem from economic limitations of lower-class families. I also discussed the infrastructural limitations of nearby towns and cities, and how the influx of "adventure tourists" can create temporary jobs, but eventually leads to an economic downturn, which in turn leads to social problems (job loss, limited incomes, overcrowded roads and pressures on infrastructural systems).

Finally the last, and perhaps the least talked about, issue is the economic inequality that certain individuals and families face when attempting to plan a trip to the park. Although data shows that the average disposable incomes for families to spend on vacation has increased significantly since the 1970's, still many families experience disparity in vacation options because "adventure tourism" and other industries have increased prices exponentially. Some of whom I interviewed voiced this fear, as entrance fees to the park have increased nominally in the last few years (NPS 2019). Families and individuals lacking in disposable income cannot fully access the breadth of experiences within the Grand Canyon National Park. Certain companies in effect monopolize experiences, such as the commercialized versus non-commercialized launches, which ostracizes families who cannot afford to pay upwards of \$500 per person. Other parts of the park, for example the area that spans the length of the Southern Rim, are so

overexposed to commercialization and tourism that, one could argue, takes away from the experience by marketing the sentimentality that individuals feel.

*Is it fair to argue that all commercialization is bad and should be avoided?* No, I do not think that commodifying certain experiences to deliver a good or service is necessarily bad. I would argue that perhaps in effect offers a larger range of people access to the experience. However, I certainly feel that by marketing in a certain way, failing to internalize certain externalities, and failing to police companies and the tourism industry as a whole from gatekeeping families from certain economic backgrounds from accessing the park, are all in part the biggest issues that come with the commodification of the Grand Canyon. Ultimately, this thesis concludes that the commodification of nature in the Grand Canyon National Park can be seen through the creation of experiences that use goods and services provided by the natural ecosystems that lie within Grand Canyon National Park for a capitalistic system that then damages natural ecosystems and serves as a form of social and economic gatekeeping.

The necessary solutions that which I think can alleviate the issues associated with tourism within Grand Canyon National Park can be stratified by each lens explored within this paper. Primarily, as is especially true with the air tourism industry within the park, there needs to be broader and more succinctly outlined regulation for each of these companies via the National Parks Service. More legislation is needed to curb the ill



effects of pollution created by the helicopters in the national park. Secondly, there should be programs which allow for greater access to the area for financially insecure individuals who are currently excluded from the system. Families who lack significant disposable incomes would benefit from discounted rates and equal opportunities to experience the goods and services of the canyon. Finally, great work can be done to create greater equality of access to the river basin. As of right now, there is a severe disparity in who can travel and experience the river basin, stratified mostly by the non-commercialized and commercialized launches. There needs to be greater equality within the permit distribution system, which would then allow for greater access to the “adventure” commodity.

Further exploration into exactly how much the National Parks System is intertwined with the tourism industry, specifically in terms of “adventure tourism”, is needed in order to continue to understand the relationship between experiences and the commodification of nature. Within this thesis, I sought to contribute to the conversation on the tourism industry within the National Parks System. It is important to be aware of the ill effects of the commodification of nature, but also to remember the important relationships between the value of nature and how individuals choose to experience natural spaces. Both of these are important to create valuable change within the tourism industry towards more sustainable and aware practices.

## VI. Afterword

The presentation of this thesis was accompanied by a musical performance of *The Grand Canyon Suite*, by Ferde Grofe, which was composed in between 1921-1931. Originally entitled, *Five Pictures at the Grand Canyon*, the piece was written in order to celebrate the Grand Canyon National Park. It's beautiful and magnificent soundscape has been used as a film score for numerous films, most notably Walt Disney Inc.'s *Grand Canyon*. This film debuted in 1958 as a tribute to the National Park. The work's most well-known, and the most comical movement, is the third movement, entitled *On the Trail*. This movement was written in order to emulate the brays of the donkey's that lead travelers down the canyon, as well as the clattering of their feet on the rocky trail. This piece holds a special place within my heart, as well as in the place of others' as well. It has become a representation of all the different images and feelings one can experience within the spread of the park.

The other movements are meant to capture other images as well. The first and the fourth movements, entitled *Sunrise* and *Sunset*, respectively, are meant to use sound to describe the wonderful colors that can be seen across the Arizona sky above the canyon during these moments. The first movement begins quietly, as the mornings usually do, as only a few instruments begin to sound (a timpani and a few horns). As the

motion increases, instruments begin to add, representing the stirrings of the numerous animals that live within the park. Finally, everything culminates in a theme played by the french horns, which is something that reoccurs in every movement in the piece, announcing the arrival of the sun. The fourth movement begins oppositely, with a large and active opening, with the main theme, representing the end of a beautiful day, while instruments begin to disappear as animals settle in for the night as the movement goes on.

The second movement, *Painted Desert*, and the fifth movement, *Cloudburst*, represent the two personalities of the Grand Canyon, one movement representing the stillness of the seemingly painted visage that lies before the travelers, and the other representing the raw power of the storms that create raucous and destructive motions. These two movements are performed less often than the other three, yet they still hold the visual and expressive power.

I think this piece is a great example of how we can use how individuals seem to perceive nature, and emulate the certain services that the Grand Canyon provides to its visitors. Here, we don't have to worry about the physical pressures we can enforce upon the natural elements, nor do we have to concern ourselves with the social and economic issues that arise within the tourism industry. This is certainly not a complete substitute; I don't know if it is possible to completely substitute the actual experience of travelling to

the Grand Canyon National Park and *living in the moment*. However, I think it certainly provides an example of how one can imagine and create experiences without the concerns of internalizing the externalities.

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